

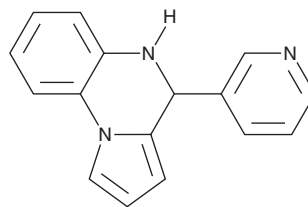
PRODUCT INFORMATION



UBCS039

Item No. 43478

CAS Registry No.: 358721-70-7
Formal Name: 4,5-dihydro-4-(3-pyridinyl)-
pyrrolo[1,2-a]quinoxaline
MF: C₁₆H₁₃N₃
FW: 247.3
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

UBCS039 is supplied as a solid. A stock solution may be made by dissolving the UBCS039 in the solvent of choice, which should be purged with an inert gas. UBCS039 is soluble (≥10 mg/ml) in DMSO. UBCS039 is sparingly soluble (1-10 mg/ml) in ethanol.

Description

UBCS039 is an activator of sirtuin 6 (SIRT6).¹ It increases the deacetylation of a peptide corresponding to acetylated lysine 9 on histone H3 (H3K9) in a cell-free assay (EC₅₀ = ~38 μM). UBCS039 selectively activates SIRT6 deacetylation activity over SIRT1, SIRT2, and SIRT3 deacetylation activities but does increase SIRT5 desuccinylation activity at 100 μM. It is active against *M. tuberculosis* (MIC = 50 μM) and is cytotoxic against a panel of six cancer cell lines (IC₅₀s = 9.53-59.25 μM).² UBCS039 (50 mg/kg) decreases disease severity, hepatocyte apoptosis, and aspartate aminotransferase (Ast), alanine transaminase (Alt), IL-1β, IL-6, and TNF-α serum levels in a mouse model of thioacetamide-induced acute liver failure.³ It increases the mean time to thrombotic occlusion in a mouse model of ferric chloride-induced arterial thrombosis when administered at a dose of 2 mg/kg.⁴

References

1. You, W., Rotili, D., Li, T.-M., et al. Structural basis of sirtuin 6 activation by synthetic small molecules. *Angew. Chem. Int. Ed. Engl.* **56(4)**, 1007-1011 (2017).
2. Makane, V.B., Krishna, E.V., Karale, U.B., et al. Synthesis of novel 4,5-dihydropyrrolo[1,2-a]quinoxalines, pyrrolo[1,2-a]quinoxalin]-2-ones and their antituberculosis and anticancer activity. *Arch. Pharm. (Weinheim)* **353(12)**, e2000192 (2020).
3. Jiao, F., Zhang, Z., Hu, H., et al. SIRT6 activator UBCS039 inhibits thioacetamide-induced hepatic injury in vitro and in vivo. *Front. Pharmacol.* **13**, 837544 (2022).
4. Liu, Y., Wang, T., Zhou, Q., et al. Endogenous SIRT6 in platelets negatively regulates platelet activation and thrombosis. *Front. Pharmacol.* **14**, 1268708 (2023).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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